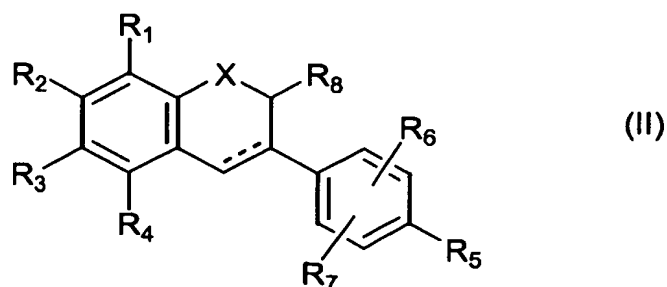


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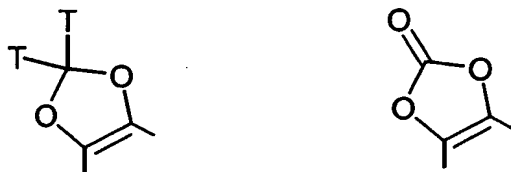
Claims

1. Use of compounds of the formula II for the prevention and/or treatment of skin photoageing or actinic damage of skin associated with UV exposure, wherein said
 5 compounds of the formula II comprise

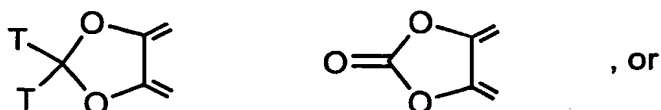


in which

- 10 R_1 , R_2 , R_3 and R_4 are independently hydrogen, hydroxy, OR_9 , $OC(O)R_{10}$, $OS(O)R_{10}$, CHO , $C(O)R_{10}$, $COOH$, CO_2R_{10} , $CONR_{11}R_{12}$, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl, alkylaryl, alkoxyaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or
- R_3 and R_4 are as previously defined, and R_1 and R_2 taken together with the carbon atoms
 15 to which they are attached form a five-membered ring selected from



- R_1 and R_4 are as previously defined, and R_2 and R_3 taken together with the carbon atoms
 20 to which they are attached form a five-membered ring selected from



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R₁ and R₂ are as previously defined, and R₃ and R₄ taken together with the carbon atoms to which they are attached form a five-membered ring selected from



5

and

wherein

R₅, R₆ and R₇ are independently hydrogen, hydroxy, OR₉, OC(O)R₁₀, OS(O)R₁₀, CHO, C(O)R₁₀, COOH, CO₂R₁₀, CONR₁₁R₁₂, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo,

R₈ is hydrogen, hydroxy, alkyl, aryl, amino, thio, NR₁₁R₁₂, CONR₁₁R₁₂, C(O)R₁₃ where R₁₃ is hydrogen, alkyl, aryl, arylalkyl or an amino acid, or CO₂R₁₄ where R₁₄ is hydrogen, alkyl, haloalkyl, aryl or arylalkyl,

R₉ is alkyl, haloalkyl, aryl, arylalkyl, C(O)R₁₃ where R₁₃ is as previously defined, or Si(R₁₅)₃ where each R₁₅ is independently hydrogen, alkyl or aryl,

R₁₀ is hydrogen, alkyl, haloalkyl, amino, aryl, arylalkyl, an amino acid, alkylamino or dialkylamino,

R₁₁ is hydrogen, alkyl, arylalkyl, alkenyl, aryl, an amino acid, C(O)R₁₃ where R₁₃ is as previously defined, or CO₂R₁₄ where R₁₄ is as previously defined,

R₁₂ is hydrogen, alkyl or aryl, or

R₁₁ and R₁₂ taken together with the nitrogen to which they are attached comprise pyrrolidinyl or piperidinyl,

the drawing "—" represents either a single bond or a double bond, preferably a double bond,

T is independently hydrogen, alkyl or aryl, and

X is O, NR₁₂ or S, preferably O,

including pharmaceutically acceptable salts and derivatives thereof.

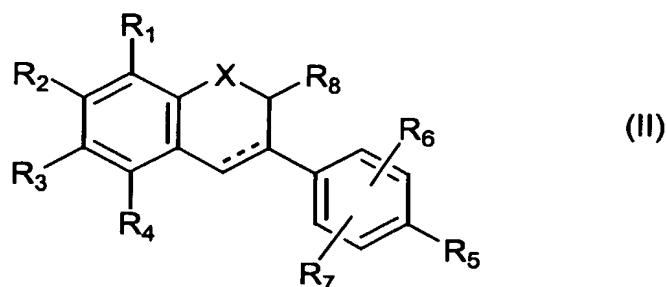
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2. Use according to claim 1 for the prevention and/or treatment of skin photoageing selected from lines, wrinkles, freckles, yellowing of skin, skin stretching, dilated capillaries, cherry red spots and dry complexion.

3. Use according to claim 1 for the prevention and/or treatment of actinic damage selected from solar keratoses or actinic keratoses.

4. Use according to claim 1 wherein said compounds of the formula (II) comprise equol or dehydroequol.

5. A method for the prevention and/or treatment of skin photoageing or actinic damage of skin which comprises administering to a subject one or more compounds of the general formula (II)

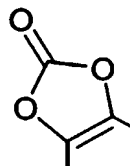
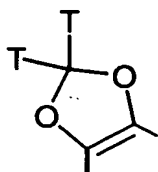


in which

R_1 , R_2 , R_3 and R_4 are independently hydrogen, hydroxy, OR_9 , $OC(O)R_{10}$, $OS(O)R_{10}$, CHO , $C(O)R_{10}$, $COOH$, CO_2R_{10} , $CONR_{11}R_{12}$, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl, alkylaryl, alkoxyaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo, or

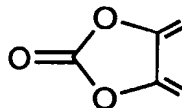
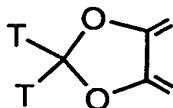
R_3 and R_4 are as previously defined, and R_1 and R_2 taken together with the carbon atoms to which they are attached form a five-membered ring selected from

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R_1 and R_4 are as previously defined, and R_2 and R_3 taken together with the carbon atoms to which they are attached form a five-membered ring selected from

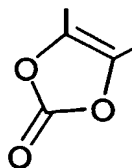
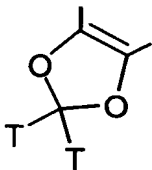
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, or

R_1 and R_2 are as previously defined, and R_3 and R_4 taken together with the carbon atoms to which they are attached form a five-membered ring selected from

10



and

wherein

- 15 R_5 , R_6 and R_7 are independently hydrogen, hydroxy, OR_9 , $OC(O)R_{10}$, $OS(O)R_{10}$, CHO , $C(O)R_{10}$, $COOH$, CO_2R_{10} , $CONR_{11}R_{12}$, alkyl, haloalkyl, arylalkyl, alkenyl, alkynyl, aryl, heteroaryl, thio, alkylthio, amino, alkylamino, dialkylamino, nitro or halo,
- R_8 is hydrogen, hydroxy, alkyl, aryl, amino, thio, $NR_{11}R_{12}$, $CONR_{11}R_{12}$, $C(O)R_{13}$ where R_{13} is hydrogen, alkyl, aryl, arylalkyl or an amino acid, or CO_2R_{14} where R_{14} is
- 20 hydrogen, alkyl, haloalkyl, aryl or arylalkyl,
- R_9 is alkyl, haloalkyl, aryl, arylalkyl, $C(O)R_{13}$ where R_{13} is as previously defined, or $Si(R_{15})_3$ where each R_{15} is independently hydrogen, alkyl or aryl,
- R_{10} is hydrogen, alkyl, haloalkyl, amino, aryl, arylalkyl, an amino acid, alkylamino or dialkylamino,

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- R_{11} is hydrogen, alkyl, arylalkyl, alkenyl, aryl, an amino acid, $C(O)R_{13}$ where R_{13} is as previously defined, or CO_2R_{14} where R_{14} is as previously defined,
 R_{12} is hydrogen, alkyl or aryl, or
 R_{11} and R_{12} taken together with the nitrogen to which they are attached comprise
5 pyrrolidinyl or piperidinyl,
the drawing "—" represents either a single bond or a double bond, preferably a double bond,
 T is independently hydrogen, alkyl or aryl, and
 X is O, NR_{12} or S, preferably O,
10 including pharmaceutically acceptable salts and derivatives thereof.
6. A method according to claim 5 wherein said one or more compounds of the formula (II) comprises equol and dehydroequol.
- 15 7. A method according to claim 5 which is a method for the prevention and/or treatment of skin photoageing selected from lines, wrinkles, freckles, yellowing of skin, skin stretching, dilated capillaries, cherry red spots and dry complexion.
8. A method according to claim 5 which is a method for the prevention and/or treatment
20 of actinic damage selected from solar keratoses or actinic keratoses.
9. A method according to claim 5 wherein said one or more compounds of the formula (II) are administered orally, parenterally or topically, before and/or after skin exposure.